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UTILITY
PATENT APPLICATION
TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. 03DJS02

First Inventor David J. Smith

Title Cast Film Cooling Method

Express Mail Label No. EK 981264129US

USPTO
1302
10/23/03

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. Applicant claims small entity status.
See 37 CFR 1.27.
3. Specification [Total Pages 10]
(preferred arrangement set forth below)
 - Descriptive title of the invention
 - Cross Reference to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to sequence listing, a table, or a computer program listing appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
4. Drawing(s) (35 U.S.C. 113) [Total Sheets 4]
5. Oath or Declaration [Total Pages 1]
 - a. Newly executed (original or copy)
 - Copy from a prior application (37 CFR 1.63 (d))
(for continuation/divisional with Box 18 completed)
 - i. **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. Application Data Sheet. See 37 CFR 1.76

ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

7. CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - a. Computer Readable Form (CRF)
 - b. Specification Sequence Listing on:
 - i. CD-ROM or CD-R (2 copies); or
 - ii. paper
 - c. Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. Assignment Papers (cover sheet & document(s))
10. 37 CFR 3.73(b) Statement Power of (when there is an assignee) Attorney
11. English Translation Document (if applicable)
12. Information Disclosure Statement (IDS)/PTO-1449 Copies of IDS Citations
13. Preliminary Amendment
14. Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15. Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. Other:

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

 Continuation Divisional Continuation-in-part (CIP)

of prior application No.: 09, 560,491

Prior application information:

Examiner: Joseph S. Leyson

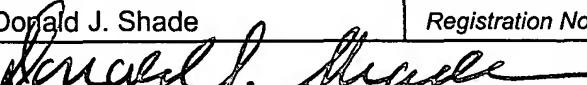
Group Art Unit: 1722

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS

Customer Number or Bar Code Label 34339 Correspondence address below
(Insert Customer No. or Attach bar code label here)

| | | | | |
|---------|---|-----------|---------------|----------|
| Name | Donald J. Shade | | | |
| Address | c/o Battenfeld Gloucester Engineering Co., Inc. 11 Dory Road, PO Box 900 | | | |
| City | Gloucester | State | Massachusetts | Zip Code |
| Country | USA | Telephone | 978.282.9317 | Fax |

| | | | |
|-------------------|--|-----------------------------------|-------|
| Name (Print/Type) | Donald J. Shade | Registration No. (Attorney/Agent) | 31059 |
| Signature |  | | |
| | Date 6/23/03 | | |

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

02527 U.S. PTO
06/23/03

PTO/SB/17 (05-03)

Approved for use through 04/30/2003. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

 Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 790)

Complete if Known

| | |
|----------------------|----------------|
| Application Number | |
| Filing Date | |
| First Named Inventor | David J. Smith |
| Examiner Name | |
| Art Unit | |
| Attorney Docket No. | 03DJS02 |

METHOD OF PAYMENT (check all that apply)

 Check Credit card Money Order Other None
 Deposit Account:

Deposit Account Number
Deposit Account Name

The Director is authorized to: (check all that apply)

Charge fee(s) indicated below Credit any overpayments
 Charge any additional fee(s) during the pendency of this application
 Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

| Large Entity | Small Entity | Fee Code (\$) | Fee Code (\$) | Fee Description | Fee Paid |
|--------------|--------------|---------------|---------------|------------------------|----------|
| 1001 750 | 2001 375 | | | Utility filing fee | 750 |
| 1002 330 | 2002 165 | | | Design filing fee | |
| 1003 520 | 2003 260 | | | Plant filing fee | |
| 1004 750 | 2004 375 | | | Reissue filing fee | |
| 1005 160 | 2005 80 | | | Provisional filing fee | |
| SUBTOTAL (1) | | | | | (\$ 750) |

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

| Total Claims | Independent Claims | Multiple Dependent | Extra Claims | Fee from below | Fee Paid |
|--------------|--------------------|--------------------|--------------|----------------|----------|
| | | | -20** | = | |
| | | | - 3** | = | |
| | | | | | 0 |

| Large Entity | Small Entity | Fee Code (\$) | Fee Code (\$) | Fee Description |
|--------------|--------------|---------------|---------------|--|
| 1202 18 | 2202 9 | | | Claims in excess of 20 |
| 1201 84 | 2201 42 | | | Independent claims in excess of 3 |
| 1203 280 | 2203 140 | | | Multiple dependent claim, if not paid |
| 1204 84 | 2204 42 | | | ** Reissue independent claims over original patent |
| 1205 18 | 2205 9 | | | ** Reissue claims in excess of 20 and over original patent |
| SUBTOTAL (2) | | | | (\$ 0) |

**or number previously paid, if greater; For Reissues, see above

3. ADDITIONAL FEES

| Large Entity | Small Entity | Fee Code (\$) | Fee Code (\$) | Fee Description | Fee Paid |
|--------------|--------------|---------------|---------------|--|----------|
| 1051 130 | 2051 65 | | | Surcharge - late filing fee or oath | |
| 1052 50 | 2052 25 | | | Surcharge - late provisional filing fee or cover sheet | |
| 1053 130 | 1053 130 | | | Non-English specification | |
| 1812 2,520 | 1812 2,520 | | | For filing a request for <i>ex parte</i> reexamination | |
| 1804 920* | 1804 920* | | | Requesting publication of SIR prior to Examiner action | |
| 1805 1,840* | 1805 1,840* | | | Requesting publication of SIR after Examiner action | |
| 1251 110 | 2251 55 | | | Extension for reply within first month | |
| 1252 410 | 2252 205 | | | Extension for reply within second month | |
| 1253 930 | 2253 465 | | | Extension for reply within third month | |
| 1254 1,450 | 2254 725 | | | Extension for reply within fourth month | |
| 1255 1,970 | 2255 985 | | | Extension for reply within fifth month | |
| 1401 320 | 2401 160 | | | Notice of Appeal | |
| 1402 320 | 2402 160 | | | Filing a brief in support of an appeal | |
| 1403 280 | 2403 140 | | | Request for oral hearing | |
| 1451 1,510 | 1451 1,510 | | | Petition to institute a public use proceeding | |
| 1452 110 | 2452 55 | | | Petition to revive - unavoidable | |
| 1453 1,300 | 2453 650 | | | Petition to revive - unintentional | |
| 1501 1,300 | 2501 650 | | | Utility issue fee (or reissue) | |
| 1502 470 | 2502 235 | | | Design issue fee | |
| 1503 630 | 2503 315 | | | Plant issue fee | |
| 1460 130 | 1460 130 | | | Petitions to the Commissioner | |
| 1807 50 | 1807 50 | | | Processing fee under 37 CFR 1.17(q) | |
| 1806 180 | 1806 180 | | | Submission of Information Disclosure Stmt | |
| 8021 40 | 8021 40 | | | Recording each patent assignment per property (times number of properties) | 40 |
| 1809 750 | 2809 375 | | | Filing a submission after final rejection (37 CFR 1.129(a)) | |
| 1810 750 | 2810 375 | | | For each additional invention to be examined (37 CFR 1.129(b)) | |
| 1801 750 | 2801 375 | | | Request for Continued Examination (RCE) | |
| 1802 900 | 1802 900 | | | Request for expedited examination of a design application | |

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 40)

SUBMITTED BY

(Complete if applicable)

| | | | | |
|-------------------|------------------------|-----------------------------------|-------|------------------------|
| Name (Print/Type) | Donald J. Shade | Registration No. (Attorney/Agent) | 31059 | Telephone 978.282.9317 |
| Signature | <i>Donald J. Shade</i> | Date | | 6/23/03 |

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PATENT APPLICATION FEE DETERMINATION RECORD
 Substitute for Form PTO-875
Application or Docket Number
03DJS02**CLAIMS AS FILED – PART I**

(Column 1) (Column 2)

| FOR | NUMBER FILED | NUMBER EXTRA |
|--|--------------|--------------|
| BASIC FEE (37 CFR 1.16(a)) | | |
| TOTAL CLAIMS (37 CFR 1.16(c)) | minus 20 = | 0 |
| INDEPENDENT CLAIMS (37 CFR 1.16(b)) | minus 20 = | 0 |
| MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(d)) | | |

* If the difference in column 1 is less than zero, enter "0" in column 2.

SMALL ENTITY

OR

| RATE | FEES |
|--------------|-------|
| | \$750 |
| X \$ _____ = | 0 |
| X \$ _____ = | 0 |
| + \$ _____ = | 0 |
| TOTAL | 750 |

**OTHER THAN
SMALL ENTITY**

| RATE | FEES |
|--------------|----------|
| | \$ _____ |
| X \$ _____ = | |
| X \$ _____ = | |
| X \$ _____ = | |
| + \$ _____ = | |
| TOTAL | |

CLAIMS AS AMENDED – PART II

(Column 1) (Column 2) (Column 3)

| AMENDMENT A | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|---|---|-------|---|------------------|
| | * | Minus | ** | = |
| Total (37 CFR 1.16(c)) | * | Minus | ** | = |
| Independent (37 CFR 1.16(b)) | | | | |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d)) | | | | |

SMALL ENTITY

OR

| RATE | ADDI- TIONAL FEE |
|--------------------|------------------------|
| X \$ _____ = | |
| X \$ _____ = | |
| + \$ _____ = | |
| TOTAL ADD'L FEE | |

**OTHER THAN
SMALL ENTITY**

| RATE | ADDI- TIONAL FEE |
|--------------------|------------------------|
| X \$ _____ = | |
| X \$ _____ = | |
| + \$ _____ = | |
| TOTAL ADD'L FEE | |

(Column 1) (Column 2) (Column 3)

| AMENDMENT B | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|---|---|-------|---|------------------|
| | * | Minus | ** | = |
| Total (37 CFR 1.16(c)) | * | Minus | ** | = |
| Independent (37 CFR 1.16(b)) | * | Minus | *** | = |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d)) | | | | |

| RATE | ADDI- TIONAL FEE |
|--------------------|------------------------|
| X \$ _____ = | |
| X \$ _____ = | |
| + \$ _____ = | |
| TOTAL ADD'L FEE | |

**OTHER THAN
SMALL ENTITY**

| RATE | ADDI- TIONAL FEE |
|--------------------|------------------------|
| X \$ _____ = | |
| X \$ _____ = | |
| + \$ _____ = | |
| TOTAL ADD'L FEE | |

(Column 1) (Column 2) (Column 3)

| AMENDMENT C | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA |
|---|---|-------|---|------------------|
| | * | Minus | ** | = |
| Total (37 CFR 1.16(c)) | * | Minus | ** | = |
| Independent (37 CFR 1.16(b)) | * | Minus | *** | = |
| FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d)) | | | | |

| RATE | ADDI- TIONAL FEE |
|--------------------|------------------------|
| X \$ _____ = | |
| X \$ _____ = | |
| + \$ _____ = | |
| TOTAL ADD'L FEE | |

**OTHER THAN
SMALL ENTITY**

| RATE | ADDI- TIONAL FEE |
|--------------------|------------------------|
| X \$ _____ = | |
| X \$ _____ = | |
| + \$ _____ = | |
| TOTAL ADD'L FEE | |

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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